

In the Claims

1. - 16. (canceled)

17. (original) A semiconductor device comprising:

a patterned deposited dielectric layer comprising a plurality of recesses therein;

a capacitor bottom plate formed within said recess;

an inhibitor layer covering only an upper region of said capacitor bottom plate such that a lower region of said capacitor bottom plate is not covered by said inhibitor layer, wherein said upper region of said capacitor bottom plate is smooth polysilicon and said lower region of said capacitor bottom plate is roughened polysilicon;

a capacitor cell dielectric layer formed over said inhibitor layer and over said bottom plate; and

a capacitor top plate layer formed over said cell dielectric layer, over said inhibitor layer, and over said capacitor bottom plate.

18. (original) The semiconductor device of claim 17, wherein:

said lower region of said capacitor bottom plate is hemispherical silicon grain (HSG) polysilicon;

said upper region of said capacitor bottom plate is smooth polysilicon; and

said inhibitor layer is oxide.

19. (original) The semiconductor device of claim 18 wherein said inhibitor layer is low silane flow oxide.

20. (presently amended) The semiconductor device of claim 17 ~~18~~ wherein said inhibitor layer is nitride.

21. (presently amended) A semiconductor device comprising:

a conductive container capacitor bottom plate layer comprising a single polysilicon layer;

a first portion of said bottom plate layer which defines ~~a~~ two adjacent receptacles, wherein said first portion of said bottom plate layer comprises a first texture;

a second portion of said bottom plate layer which defines a rim to an interior of said two receptacles, wherein said second portion of said bottom plate layer comprises a second texture which is smoother than said first texture; and

a dielectric layer interposed between two adjacent receptacles of the plurality of receptacles;

an inhibitor layer contacting said dielectric layer and said second portion of said bottom plate layer which defines the rim to the interior of said two adjacent receptacles; and

a cell dielectric layer formed over said bottom plate layer which contacts said first portion and said second portion of said bottom plate layer of the two adjacent receptacles.

22. (canceled)

23. (previously presented) The semiconductor device of claim 21, wherein:

said first portion of said container capacitor bottom plate layer is hemispherical silicon grain (HSG) polysilicon; and

said second portion of said container capacitor bottom plate layer is smooth polysilicon.

24. (previously presented) A semiconductor device comprising a container capacitor, said container capacitor comprising:

a capacitor bottom plate having a bottom and an inside which together define a receptacle, a rim which defines an opening to an interior of said receptacle, and an outside;

an inhibitor layer is on said bottom and on said rim of said capacitor bottom plate, wherein said bottom and said rim of said capacitor bottom plate have a first texture and said inside of said capacitor bottom plate has a second texture which is rougher than said first texture;

a capacitor cell dielectric is on said inhibitor layer on said bottom and said rim of said capacitor bottom plate, on said inside of said capacitor bottom plate, and over said outside of said capacitor bottom plate; and

a capacitor top plate formed on said cell dielectric layer.

25. (previously presented) The semiconductor device of claim 24 further comprising a dielectric layer which covers said outside of said capacitor bottom plate, wherein said outside of said bottom plate has said first texture.

26. (previously presented) The semiconductor device of claim 24 wherein said cell dielectric layer contacts a majority of said outside of said capacitor bottom plate, and said majority of said outside of said capacitor bottom plate has said second texture.

27. (new) The semiconductor device of claim 17, wherein:

said lower region of said capacitor bottom plate is hemispherical silicon grain (HSG) polysilicon;

said upper region of said capacitor bottom plate is smooth polysilicon; and

said inhibitor layer is silicon nitride.

28. (new) An electronic device comprising at least one semiconductor device, wherein the semiconductor device comprises:

a patterned deposited dielectric layer comprising an opening therein;

a capacitor bottom plate at least partially formed within the opening in the dielectric layer;

an inhibitor layer covering an upper region of the capacitor bottom plate such that at least a portion of the lower region of the capacitor bottom plate is not covered by the inhibitor layer, wherein the upper region of the capacitor bottom plate is smooth polysilicon and the lower region of the capacitor bottom plate is roughened polysilicon;

a capacitor cell dielectric layer formed over the inhibitor layer and over the bottom plate; and

a capacitor top plate layer formed over the cell dielectric layer, over the inhibitor layer, and over the capacitor bottom plate.

29. (new) The electronic device of claim 28, wherein the at least one semiconductor device further comprises:

the lower region of the capacitor bottom plate is hemispherical silicon grain (HSG) polysilicon;

the upper region of the capacitor bottom plate is smooth polysilicon; and

the inhibitor layer is oxide.

30. (new) The electronic device of claim 29 wherein the inhibitor layer of the at least one semiconductor device is low silane flow oxide.

31. (new) The electronic device of claim 28, wherein the at least one semiconductor device further comprises:

the lower region of the capacitor bottom plate is hemispherical silicon grain (HSG) polysilicon;

the upper region of the capacitor bottom plate is smooth polysilicon; and

the inhibitor layer is silicon nitride.